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Remarks**REMARKS**

This amendment responds to the official action mailed January 30, 2009, wherein claims 1, 2, 8, 9, 12 and 32 were considered obvious in new grounds of rejection, and the rejection was made final. The claims are now rejected under 35 U.S.C. §103, over US 3,796,377 – O'Hare.

The Examiner's statement of the rejection under 35 U.S.C. §103 applies applicant's claim language to aspects that are asserted to be disclosed by O'Hare. However, the rejection is erroneous. O'Hare plainly fails to disclose, suggest or render obvious the aspects of independent claim 1 that are alleged in the official action to be met by O'Hare.

An application of the elements recited in the claims to the prior art in a manner that is factually erroneous, is insufficient to support a rejection under 35 U.S.C. §103. There are multiple aspects recited in the claims that are not met by the prior art cited in the official action as disclosing such aspects. Even if one could argue that there is a similarity in structure or function or as to a probable benefit to modification, there is no possible basis to assert that it would be routine or obvious to make the wholesale changes that characterize the differences between the invention and the prior art.

A rejection under Section 103 requires a reasoned explanation articulating grounds of obviousness as described in *KSR v. Teleflex*. There is no reasoned explanation to articulate grounds of rejection in the official action. On the contrary, the conclusions of obviousness assert that changes would be obvious matters of design choice "since the device will still function properly with such a modification." This is an improper legal standard to assess obviousness. Further, the conclusion is factually erroneous, because changing the structures and relative juxtaposition of elements in a shower head aerator certainly alters the functioning of such a device. The rejection of record is both legally and factually erroneous. Therefore, applicant requests that the rejection be withdrawn and the claims allowed.

US 3,796,377 - O'Hare was cited as an anticipation of certain claims in the official action of September 18, 2007. Applicant overcame the rejection in the response filed

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December 27, 2007. There is no basis to assert that reversion to a reference that was already of record in the case, and assertion of new alternative grounds of rejection under a different section of the statute, was necessitated by applicant's amendment. Accordingly, the finality of the rejection is misplaced.

The element-by-element application of the claim language to the O'Hare reference as set forth in the official action is erroneous, which can be appreciated by a direct comparison of the claims, the prior art reference and the aspects of the prior art reference that are alleged in the official action to meet the claims.

Claim 1 recites: *a shower head having a housing and a water inlet for admitting water to the housing.* The official action points out that O'Hare discloses a shower head having a housing and a water inlet 22. (See Fig. 2.) Claim 1 further recites *a jet disk for exit of jets, wherein the jet disk has a front face having numerous apertures from which the jets exit.* The official action refers to element 30 of O'Hare as a the jet disk. However element 30 in O'Hare is not a jet disk for exit of jets. Element 30 in O'Hare is a perforated plate that forms the downstream part of an internal aerator. It is not a jet disk for the exit of jets and instead is configured to insert a flow of aerated water into a mixing chamber from which a jet disk located well downstream forms the exiting jets.

O'Hare has a shower head with a housing that has an internal aerator, shown assembled in Fig. 1 and shown exploded in Fig. 2. The aerator injects air into the flow of water into an intermediate turbulent mixing chamber from which water jets are emitted. The embodiment of Figs. 1 and 2 sprays water jets through holes 54 (Fig. 5), the size of which is adjustable by turning a threaded middle element 14. An alternative embodiment is shown in Fig. 7 wherein a plate 120 with fixed size holes 122 emits the jets, but in other respects is similar to that of Figs. 1 and 2.

The internal aerator in O'Hare, located upstream of the turbulent mixing chamber, has two perforated plates 26, 30, spaced from one another in the water flow direction by a gap or chamber 34. Air is fed into chamber 34 from the sides, by orifices 20. O'Hare teaches at column 3, lines 3-19 that holes 28, 32 are aligned across chamber 34. The downstream holes are larger than the upstream holes. Water that passes through the aligned holes sucks in air from chamber 34. The water and entrained air emerging from

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downstream plate 30 flows into the middle element 14 and through the lower element 16 threaded therein. The lower element 16 defines a mixing chamber 48 in Figs. 1-5 (the equivalent being mixing chamber 118 in the embodiment of Fig. 7). Exiting jets are formed at holes 54 (Fig. 5) or 122 (Fig. 7).

There is no reason to assert that the flow passing out of the aerator in O'Hare comprised exiting jets. Further, applicant has eliminated any arguable relevance of the O'Hare internal aerator and holes therein by reciting in claim 1 that the jet disk has a front face having numerous apertures from which the jets exit from the shower head. It is not possible to construe the claim so broadly as to consider O'Hare even remotely similar to the invention claimed as a whole.

Applicant's claim 1 recites *an aerator for aerating water flowing through the shower head, wherein the aerator is configured such that the aerator generates discrete aeration jets and comprises a hub located centrally in the jet disk, with an axial passage through which air intake takes place from the front face of the jet disk*. The recited hub is located centrally in the jet disk. The jet disk as claimed is the element from which the jets exit from the shower head. Thus, the Examiner's application of the claims to O'Hare does not apply. O'Hare's internal aerator and downstream spray disk does not resemble applicant's invention. There is no basis for a person of ordinary skill even to suspect that beneficial results could be obtained by structuring an aerator with a central hub air intake in the front face of the jet disk from which water jets exit the showerhead. To consider the possibility would entail eliminating O'Hare's mixing chamber, and eliminating the rear-facing air inlets that O'Hare uses to feed air into his internal aerator device. It would not be an obvious matter to eliminate the very same aspects that O'Hare teaches to be important.

In applicant's claim 1, not only is the air inlet via a central hub in the jet disk from which the jets exit the showerhead, but the hub carries the aeration air in a direction opposite from the water flow, through the jet disk. Accordingly, claim 1 recites that *the hub has at least one radial air conduit in a vicinity of an end of the hub that is located upstream of the jet disk and faces an interior of the housing*. In this way, air is brought in a direction opposed to the water flow, and carried through a radial air conduit on the

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upstream side of the jet disk. Even assuming that O'Hare's internal aerator disk (or either of O'Hare's two spaced disks) had some relationship to a jet disk from which jets exit the shower head, there is no basis to consider O'Hare's internal aerator disk to have such a hub structure.

The official action recognizes that O'Hare lacks a central hub air inlet. But that aspect has been dismissed in the Examiner's comments as obvious. Reconsideration is requested. The Examiner states, "The hub 26 being centrally located in the disk 30 would have been a matter of design choice since the device will still function properly with such a modification." However a central hub in O'Hare's plate 26 (which plate 26 is by no means a hub as disclosed in O'Hare) would open in the mixing chamber 42 or 118, and would appear to prevent the device from operating "properly." O'Hare specifically teaches that there is an issue with the flow and pressure parameters of the internal aerator wherein overly-constricting the jet disk outlet openings 54 (where the jets exit the shower head) produces back pressure that could cause water to blow out backwards through the aerator inlet passages 20, unless the outlet openings 54 are kept open by some threshold dimension. (See column 4, lines 24-37.) An aerator with a central hole in plate 26 would not be considered likely to aerate because its inlet would open inside the mixing chamber. Backpressure in the mixing chamber would oppose air suction into the chamber 34. There could be no obvious expectation to feed air to the upstream side of plate 26. It would not be obvious to reconfigure O'Hare's shower head because the person of ordinary skill would see from the O'Hare specification that the shower head would NOT operate properly if reconfigured in the ways proposed.

Applicant's claim 1 also recites that the hub (namely the hub located centrally in the jet disk, with an axial passage through which air intake takes place from the front face of the jet disk) *has on an exterior of the hub essentially axially arrayed guides for guiding the discrete aerated jets toward the apertures from which the jets exit the jet disk.* In the official action, it is asserted that the holes in plate 26 are in fact axially arrayed guides on the exterior of the hub. Of course that conclusion is entirely factually erroneous.

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Holes in a plate are not axially arranged guides on the exterior of a hub. Even if the plate could somehow be considered a central hub, which of course it cannot, the holes in that plate are not axially arranged on the exterior. The application of the claims to the prior art is simply erroneous. There is no basis to conclude that the invention claimed as a whole is obvious from the cited patent to O'Hare. Nor is there any reasoned articulation that would support the proposition that the person of ordinary skill who started with O'Hare and had a normal degree of skill and common sense, would perceive a likelihood of a beneficial result by reconfiguring O'Hare. The changes needed would at least include omitting O'Hare's mixing chamber and O'Hare's technique of forming outlet jets using already-aerated water, eliminating O'Hare's rear-air-feed and instead feeding air in a direction opposed to water flow, and even discarding the entire idea of aeration using spaced plates with aligned axial holes. There is no articulation on the record to support why the person of ordinary skill would perceive a likelihood of a beneficial result to be obtained from any single one of these reconfiguration steps. There is certainly no basis to suggest that taking all the steps would be routine or obvious.

The rejection under 35 U.S.C. §103 is baseless. Many of the aspects that are particularly and distinctly defined in independent claim 1 are not met by the cited prior art. There is no articulated basis of record explaining in a factually defensible way how they could possibly be met by the prior art or regarded as obvious.

Independent claim 1 defines the jet disk for exit of jets, i.e., jets of water are formed and emitted in the downstream direction. There is no basis to consider O'Hare's downstream plate element 30 to meet or resemble the jet disk defined in the claims. Plate 30 does not produce discrete streams or jets that exit the shower head. The streams that pass through plate 30 are directed into the hollow mixing chamber 48 (or 118), where the conditions expressly described by O'Hare are those of turbulent mixing. See O'Hare at column 4, lines 16-23.

From the hollow mixing chamber 48, the water flows through the exit orifice 50. See figure 2. The flow is neither in a state of discrete jets nor oriented in a direction toward the outlet face of the shower head. There is no teaching or suggestion of exiting

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jets. In Figs. 1 and 2, O'Hare's flow does not proceed directly from the mixing chamber through a plate at all. The flow proceeds laterally from mixing chamber 48 through radial passages 50 (see Fig. 2) and exits at openings 54 between slots in the marginal edge of disk 52 and the inner face of skirt 56 (see column 3, line 37). The prior art does not teach or suggest the claimed invention.

Independent claim 1 recites the further feature of the hub located centrally in the jet disk, with an axial passage. This cannot be dismissed as a design choice irrelevant to operation because it determines where the aeration occurs. In the cited O'Hare device, it is necessary to provide eight aeration air inlet openings 20, shown in Fig. 3, and various aligned openings 26, 32 in the spaced plates 28, 30. With applicant's central aeration hub, only one aeration opening is necessary and the air is sucked into the housing of the showerhead in a direction that is opposite to the flow of water in which the air is to be entrained. Even with just one opening, applicant's configuration can achieve uniform aeration over the full area of the jet emitting disk.

Applicant's claim 1 recites the further aspect of a radial conduit in the vicinity of the upstream end of the hub that feeds aeration air from the central hub to the area of the jet disk. Notwithstanding the alleged application of the claims to the prior art as stated in the official action, there is no similar air conduit provided by O'Hare or suggested by O'Hare. It can be seen in Fig. 2 that there is no structure whatsoever between the apertured plates 26 and 30. There is nothing at or near the center of the downstream plate (regarded in the official action as a hub) that could conceivably resemble a radial air conduit. The Examiner asserts that the air passage that feeds radially inwardly to the space between the plates 26, 30 functions the same as one that feeds radially outwardly but that official position ignores the fact that there is no possible or routine way to find a source of air in the mixing chamber 48. Therefore, there is no basis to assert that the person of ordinary skill could ever expect to produce an operable air inlet from a central hub in O'Hare's downstream apertured plate. From a prospective view of the reference, as opposed to a reconfiguration from hindsight knowledge of applicant's solution, there is no basis to assert that the claimed invention would have been obvious.

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Claim 1 recites the further feature that on its exterior, the central hub in the jet disk that functions as an air inlet, has axially arrayed guides for guiding the discrete aerated jets. In the device of O'Hare, the streams exiting from the openings 32 of disk 30 flow into the turbulent hollow space 48, and from the chamber 48 flow through several openings 50. There are no aeration jets in O'Hare. There is turbulent aerated water and on flowing radially and then exiting at the slots 54, discrete streams of previously-aerated water are emitted. O'Hare does not teach or suggest aeration of jets that are exiting from the shower head at the jet disk, as particularly and distinctly claimed.

The claims as amended particularly and distinctly define the subject matter of the invention and patentably distinguish over O'Hare and the other prior art of record. The differences between the invention and the prior art are such that the subject matter claimed as a whole is not shown to have been obvious to a person of ordinary skill and routine common sense.

Applicant requests allowance of claims 1, 2, 8, 9, 12 and 32. Applicant also requests rejoinder of the claims that have been withdrawn from consideration and allowance together with claim 1, from which they depend.

Respectfully submitted,

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